

What is claimed is:

1. A computer-implemented method of illustrating networking addresses, comprising:

accessing definitional information of a set of the networking addresses, the definitional information defining one or more attributes for the networking addresses of the set; and

rendering a display of the set of networking addresses wherein the display provides a first visual indicator for networking addresses having a first value of a first attribute and a second visual indicator for networking addresses having a second value of the first attribute.

2. The computer-implemented method of claim 1, further comprising:

determining an origin and mask size of the set of the networking addresses to be displayed; and

when rendering the display, using the origin and mask size to set the boundary of the display.

3. The computer-implemented method of claim 1, wherein determining an origin and mask size of the set comprises receiving a user selection to zoom out of a current displayed set of the networking addresses to display a set containing a larger number of addresses.

4. The computer-implemented method of claim 1, wherein determining an origin and mask size of the set comprises receiving a user selection to zoom in on a current displayed set of the networking addresses.

5. The computer-implemented method of claim 1, wherein rendering the display comprises rendering a grid space representing the set of the networking addresses, and wherein at least one rectangle is rendered within the grid space to

represent a block of networking addresses with the at least one rectangle being provided with the first visual indicator.

6. The computer-implemented method of claim 5, wherein a second rectangle is rendered within the grid space to represent a second block of network address with the second rectangle being provided with the first visual indicator.

7. The computer-implemented method of claim 5, wherein a second rectangle is rendered within the grid space to represent a second block of network address with the second rectangle being provided with the second visual indicator.

8. The computer implemented method of claim 5, wherein the at least one rectangle is provided with the second visual indicator in addition to the first visual indicator.

9. The computer-implemented method of claim 5, wherein the area of each of the blocks is representative of the number of networking addresses within the blocks.

10. The computer-implemented method of claim 1, wherein the first visual indicator is a first color and wherein the second visual indicator is a second color.

11. The computer-implemented method of claim 1, wherein the first attribute is status.

12. The computer-implemented method of claim 11, wherein the first visual indicator indicates an allocated status and the second visual indicator indicates a free status.

13. The computer-implemented method of claim 12, wherein rendering a display further comprises providing a third visual indicator for the first value and wherein the third visual indicator indicates a reclaimed status.

14. The computer-implemented method of claim 1, wherein rendering the display comprises rendering a first shape representative of ranges of networking addresses of the set having a status attribute that is defined as free and rendering a second shape representative of ranges of networking addresses of the set having the status attribute that is defined as allocated, and wherein the relative areas of the first and second shapes are representative of the size of the range of networking addresses represented by the first and second shapes.

15. The computer-implemented method of claim 14, wherein the first and second shapes are pie wedges included within a displayed pie chart.

16. The computer-implemented method of claim 1, wherein the first attribute corresponds to the parent network and subordinate networks for which the networking addresses are assigned, and wherein the first value indicates the parent network and the second value indicates a first subordinate network.

17. The computer-implemented method of claim 1, wherein rendering the display of the set of networking addresses comprises displaying individual networking address blocks that are adjacent and span grid spaces of a map that are individually selectable.

18. The computer-implemented method of claim 17, wherein displaying individual networking address blocks that span grid spaces that are individually selectable comprises displaying a networking address value when a cursor is placed over the individual grid space.

19. The computer-implemented method of claim 17, wherein grid spaces comprise individual networking addresses.

20. The computer-implemented method of claim 1, wherein the networking address space is layer three of the communications protocol stack.

21. The computer-implemented method of claim 1, wherein networking address space is layer four of the communications protocol stack.

22. A computer system for illustrating networking addresses, comprising:  
storage containing definitional information of a set of the networking addresses,  
the definitional information defining one or more attributes for the networking addresses  
of the set;

a display device; and

a processing device configured to initiate a display of the set of networking  
addresses on the display device, wherein the display provides a first visual indicator for  
networking addresses having a first value of a first attribute and a second visual indicator  
for networking addresses having a second value of the first attribute.

23. The computer system of claim 22, wherein the processing device is further  
configured to determine an origin and mask size of the set of the networking addresses to  
be displayed, and when rendering the display, using the origin and mask size to set the  
boundary of the display.

24. The computer system of claim 22, wherein the processing device is  
configured to initiate the display of the set of addresses by rendering a grid space  
representing the set of the networking addresses and rendering rectangles within the grid  
space to represent blocks of the networking addresses with at least one of the rectangles  
being provided with the first visual indicator and with at least one of the rectangles being  
provided with the second visual indicator.

25. The computer system of claim 24, wherein the area of each of the blocks  
is representative of the number of networking addresses within the blocks.

26. The computer system of claim 22, wherein the first visual indicator is a  
first pattern and wherein the second visual indicator is a second pattern.

27. The computer system of claim 22, wherein the first attribute is status.

28. The computer system of claim 27, wherein the first visual indicator indicates an allocated status and the second visual indicator indicates a free status.

29. The computer system of claim 28, wherein the processing device is further configured to provide a third visual indicator for the first value and wherein the third visual indicator indicates a reclaimed status.

30. The computer system of claim 22, wherein the processing device renders a first shape representative of ranges of networking addresses of the set having an assigned network attribute that is defined as a first network name and renders a second shape representative of ranges of networking addresses of the set having the assigned network attribute that is defined as a second network name, and wherein the relative areas of the first and second shapes are representative of the size of the range of networking addresses represented by the first and second shapes.

31. The computer system of claim 30, wherein the first and second shapes are pie wedges included within a displayed pie chart.

32. The computer system of claim 22, wherein the first attribute corresponds to subordinate networks for which the networking addresses are assigned, and wherein the first value indicates a first subordinate network and the second value indicates a second subordinate network.

33. The computer system of claim 22, wherein the networking address space is layer three of the communications protocol stack.

34. A computer readable medium containing instructions that when performed by a computer perform the steps of:

determining values of an attribute for a plurality of networking addresses;

rendering a display of the plurality of networking addresses wherein the display includes a first indicator for networking addresses having a first value for the attribute and includes a second indicator for networking addresses having a second value for the attribute.

35. The computer-readable medium of claim 34, wherein determining values of an attribute for a plurality of networking addresses comprises referencing a definitional list for the plurality of networking addresses that lists the values of the attribute for the plurality of networking addresses.

36. The computer-readable medium of claim 34, wherein rendering a display of the plurality of networking addresses comprises displaying a grid space including rectangles representing blocks of networking addresses of the set wherein a rectangle is displayed with the first indicator where the block for the rectangle contains networking addresses having the first value for the attribute and wherein the rectangle is displayed with the second indicator where the block for the rectangle contains networking addresses having the second value for the attribute.

37. A computer-implemented method of illustrating networking address structure, comprising:

accessing definitional information of a set of the networking addresses, the definitional information defining at least one parent network and at least one subordinate network of the parent network for the networking addresses of the set; and

rendering a display of the at least one parent network and at least one subordinate network of the parent network, wherein the display is a tree illustrating a hierarchical structure of the parent and subordinate networks.

38. The computer-implemented method of claim 37, wherein the tree lists a name assigned to each of the parent and subordinate networks of the hierarchical structure according to the definitional information.

39. The computer-implemented method of claim 37, wherein the tree provides an indicator of the type of networking addresses used for the parent and subordinate networks according to the definitional information.

40. The computer-implemented method of claim 37, wherein the tree provides an indicator of whether the subordinate networks are aggregated with the parent network according to the definitional information.

41. The computer-implemented method of claim 37, wherein the tree further provides selections for expanding and collapsing the display of the subordinate networks of a parent network.



42. A computer-implemented method of illustrating networking addresses, comprising:

constructing a multi-dimensional arrangement of a linear index of networking addresses, in which each position in the arrangement corresponds to a specific value or group of values of the index, and wherein the data set includes definitional information of the networking addresses defining one or more attributes associated with each network address; and

displaying the arrangement such that at each position in the arrangement, a first visual indicator is provided for the network addresses having a first value for the first attribute and a second visual indicator is provided for the network addresses having a second value for the first attribute.

43. The computer-implemented method of claim 40, wherein the networking addresses are Internet Protocol addresses.